CLAIMS

1. A device (2) in which food can be heated by means of inductive coupling, comprising at least one secondary winding (6) formed from a current conductor to which at least one heating element (7) is connected, characterised in that the secondary winding (6) is cast in a winding body (8") by a casting means (10"), and that the insulating casting means (10") has a coefficient of thermal expansion which substantially corresponds to that of the winding body (8").

2. A device (1) for transferring energy into a device (2) for heating food by means of induction comprising a primary winding (5) formed from a current conductor and connected to a voltage source, characterised in that the primary winding (5) is cast in a winding body (8') by casting means (10') and that the insulating casting means (10') has a coefficient of thermal expansion which substantially corresponds to that of the winding body (8').

3. The device (1, 2) according to claim 1 or claim 2, characterised in that an electrically non-conducting protective layer (11, 11') having a small thickness is disposed on the winding body (8', 8"), said layer having a coefficient of thermal expansion which substantially corresponds to that of the winding body (8', 8").

4. A device (2) in which food can be heated by means of inductive coupling, comprising at least one secondary winding (6) formed from a current conductor to which at least one heating element (7) is connected, characterised in that the secondary winding (6) is arranged in a winding body (8") and that an electrically non-conducting protective layer (11') having a small thickness is disposed on the winding body (8"), said layer having a coefficient of thermal expansion which substantially corresponds to that of the winding body (8").

5. A device (1) for transferring energy into a device (2) for heating food by means of induction comprising a primary winding (5) formed from a current conductor and connected to a voltage source, characterised in that the primary winding (5) is arranged in a winding body (8') and that an electrically non-conducting protective

layer (11') having a small thickness is disposed on the winding body (8'), said layer having a coefficient of thermal expansion which substantially corresponds to that of the winding body (8').

6. The device (1, 2) according to one of said claims, characterised in that the winding body (8', 8") consists of ferrite.

7. The device (1, 2) according to one of said claims, characterised in that the coefficient of thermal expansion of the protective layer (11', 11") and/or the casting means (10', 10") is matched to the coefficient of thermal expansion of the winding body (8', 8") for a temperature range of 20°C to 150°C.

8. The device (1, 2) according to one of said claims, characterised in that the winding body (8', 8") is constructed with a recess (9', 9") in which the primary or the secondary winding (5, 6) is arranged.

9. The device (1, 2) according to one of said claims, characterised in that the winding body (8', 8") is configured as rotationally symmetrical.

10. The device (1, 2) according to one of said claims, characterised in that the protective layer (11', 11") has a high material hardness.

11. The device (1, 2) according to one of said claims, characterised in that the protective layer (11', 11") is an amorphous hydrocarbon layer.

12. The device (1, 2) according to one of said claims, characterised in that the protective layer (11', 11") has a maximum thickness of 500 μm.

13. The device (1, 2) according to one of said claims, characterised in that the casting means (10', 10") comprises epoxy resin or polyamide.

14. The device (1, 2) according to one of said claims, characterised in that the casting means (10', 10") comprises filler especially made of ceramic.

15. The device (2) according to one of said claims, characterised in that the heating element (7) comprises at least one heating conductor which has a meander-shaped or a bifilar spiral profile.

16. The device (2) according to one of said claims, characterised in that thermal insulation is disposed between the secondary winding (6) and the heating element (7).

17. The device (2) according to one of said claims, characterised in that the thermal insulation comprises vermiculite.

18. The device (2) according to one of said claims, characterised in that the protective layer (11") is a film which is arranged on the winding body (8").

19. The device (2) according to one of said claims, characterised in that the protective layer (11") consists of ceramic or polytetrafluoroethylene (PTFE).